

FOOD HANDLER'S GUIDE



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Your Role as a Food Operator

The food service industry is one of the largest industries in the United States. About 1/3 of all food eaten in the U.S. is prepared by the food service industry. As a member of this industry, it is your responsibility to take all necessary steps to ensure the safety of the food offered for sale to the public. This responsibility becomes more critical as our population of susceptible citizens increases (elderly, high risk and children). These are the people who are most likely to become extremely ill or die from foodborne illness. The public depends on the food operator to use reasonable care to prevent foodborne illnesses from occurring. The food service industry plays a very important role in protecting the public's health; this responsibility must be taken very seriously.



Foodborne Illness

Foodborne illness is a disease that is carried or transmitted to human beings by food and can be broken down into three main categories:

- Biological**
 - Bacterial
 - Viral
 - Fungi
 - Parasites
 - Toxins
- Chemical**
 - Pesticides/Food Service Chemicals
 - Additives & Preservatives
- Physical**
 - Broken Glass
 - Staples
 - Nails
 - Dirt

The greatest number of food poisonings are bacterial. Bacteria are microscopic living organisms. Bacteria are found almost everywhere; on food preparation surfaces, food, skin, and in your body. Some bacteria can transmit disease by improper food handling. Food that looks, tastes, and smells good can still make people sick.





Some well known diseases transmitted by food include:

- Hepatitis A
- Typhoid Fever
- Cholera
- Amoebic Dysentery
- Scarlet Fever
- Strep Throat
- Botulism

Some of the more frequently seen food poisonings result from salmonella, staphylococcus and clostridium. All of these diseases are capable of causing illness and discomfort in the infected individual. Symptoms can include: vomiting, diarrhea, weakness, dehydration, fever and chills. Some cases can even cause death in certain individuals. At highest risk are the very young, the elderly, and people in poor health or with specific medical conditions, such as diabetes or impaired immunity.

**Any outbreak
of foodborne
illness is
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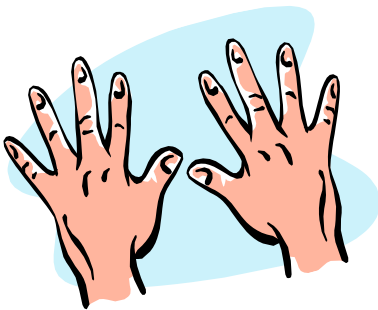
Any outbreak of foodborne illness is a serious matter. In addition to the personal suffering, there may be monetary costs to a food service that include fees for testing food samples and employees, cleaning and sanitizing the establishment, and throwing away all food and supplies that may be contaminated. An establishment may be forced to close temporarily – thus losing revenue – or to close permanently. Employee morale and productivity will probably suffer; turnover may increase. Customers may be driven away by the bad publicity. Finally, the courts are likely to hold the establishment responsible for the expenses of anyone made ill by the food, and may also award extra sums of money as punishment for negligence.

Implementing proper food handling practices can prevent foodborne illnesses from occurring. By implementing an effective food safety program, you may not only prevent a foodborne outbreak and avoid its high costs, but also collect the benefits from an efficient system. These benefits may include reducing food waste and spoilage, gaining an edge on your competition by improving the quality of your food, and increasing the awareness and involvement of your employees.

Preventing Foodborne Illness

Worker Hygiene

The best way to keep bacteria from getting into food is by practicing good personal hygiene. Hands should be washed thoroughly with soap and warm water. Fingernails must be kept clean and trimmed. The California State law requires employees to wash hands at the following times:



- 1) Immediately before engaging in food preparation, including working with unpackaged food, clean equipment and utensils, and unwrapped single-service food containers and utensils.
- 2) Before dispensing or serving food or handling clean tableware and serving utensils in the food service area.
- 3) As often as necessary, during food preparation, to remove soil and contamination and prevent cross-contamination when changing tasks.
- 4) When switching between working with raw foods and working with ready-to-eat foods.
- 5) After touching bare human body parts other than clean hands and clean, exposed portions of arms.
- 6) After using the toilet room.
- 7) After caring for or handling any animal allowed in a food facility (seeing eye dogs)
- 8) After coughing, sneezing, using a handkerchief or disposable tissue, using tobacco, eating, or drinking.
- 9) After handling soiled equipment and utensils.
- 10) After engaging in any other activities that contaminate the hands.

Practicing good personal hygiene is extremely important in preventing foodborne illness.

Dry hands with disposable paper towels or hot air blowers. Do not use a cloth towel, as cloth can hold and breed bacteria. Wash your hands only in the restroom sink or in the handsink. Do not wash hands in the utensil sink or the food preparation sink. This can contaminate food and utensils.

Long hair needs to be restrained to keep it from falling into food. Break any habits of touching exposed body parts, face, mouth or hair.

When employees are sick, they must stay home. Coughing or sneezing on food can contaminate it with bacteria.





Temperature Control

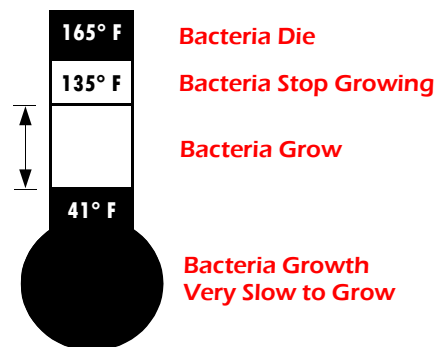


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THE DANGER ZONE

Foods which can support the rapid growth of bacteria and/or formation of toxins are called “potentially hazardous foods.” Examples of potentially hazardous foods are those high in protein and moisture, such as meat, fish, poultry, dairy products and eggs; and cooked vegetables and grains, like beans and rice.

DANGER ZONE



Potentially hazardous foods should be kept Cold at or below 41° F or Hot at or above 135° F

No potentially hazardous foods should be kept at the temperature range between 41° F and 135° F. This is called the Danger Zone because harmful bacteria multiply rapidly at these temperatures.



2

HOT HOLDING

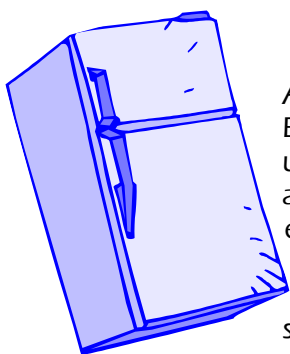
All potentially hazardous foods to be served hot must be held at 135° F or above. Although most bacteria are destroyed when reheating to 165° F, bacteria in the “spore” form may survive this temperature. Maintaining the food product at a temperature of 135° F or above will keep the “spore” former from multiplying in numbers and from producing a toxin which could cause foodborne illness.

Take the following steps when holding hot food:

- a) Pre-heat hot holding equipment prior to placing food in the unit. Set temperature high enough to maintain food at 135° F or above (160° F – 175° F)
- b) Pre-heat food before placing in the steam table. NEVER heat food in the steam table!!! The steam table is designed only to hold food, not to heat it up
- c) Do not overfill hot holding trays or units
- d) Stir frequently to avoid cold spots
- e) Keep covered
- f) Take temperatures of the food once every 2 hours and log on a data sheet



3

COLD HOLDING

All refrigeration units must be monitored and maintained at or below 41° F. Each refrigerator must have a thermometer located near the door of the unit. Food must be arranged in the cooler to allow cold air to circulate around the containers. Never store a raw drippy product above "ready to eat" products (vegetables, salads, fruit). While holding potentially hazardous foods outside the refrigerator, an ice bed is necessary to keep the food at or below 41° F. Containers of food must be sunk down into the ice, not just sitting on top. Also, fresh ice must be added as old ice melts.



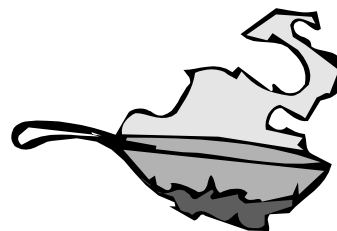
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COOKING TEMPERATURES

Because inadequate cooking is a leading cause of foodborne illness, California State law now requires special cooking temperatures for the following foods:

- a) Ground, chopped, or flaked and formed meats – 155° F for 15 seconds or 157° F for 10 seconds
- b) Eggs and foods containing eggs – 145° F
- c) Pork and pork products – 145° F
- d) Poultry, stuffed fish, stuffed meat/poultry and foods stuffed with meat/poultry – 165° F

NOTE: Microwave foods must be heated to 165° F minimum temperature





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COOLING TECHNIQUES



Heated food should be cooled rapidly in two phases:

- 1) From at or above 135° F to 70° F within two hours, then
- 2) From 70° F to 41° F or below within four hours

One or more of the following rapid cooling methods should be utilized when cooling potentially hazardous foods:

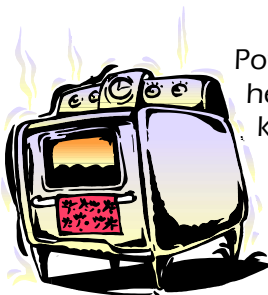
- a) Placing in shallow (4" max), heat conducting pans. The depth of food inside the pan should be no greater than 2" for thick foods (beans, rice, sauces & stews) and 3" for thin foods (broth & stocks);
- b) Separating the food into smaller or thinner portions;
- c) Using rapid cooling equipment such as a blast chiller; and,
- d) Inserting appropriately designed containers in an ice bath and stirring frequently.

Foods that are prepared at room temperature must be cooled to 41° F or below within four hours. Foods should be loosely covered or uncovered, if protected from contamination to allow the food to cool faster.



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REHEATING



Potentially hazardous foods that were previously heated must be re-heated rapidly to a minimum internal temperature of at least 165° F to kill bacteria that have grown as the food cooled after heating.



THAWING METHODS

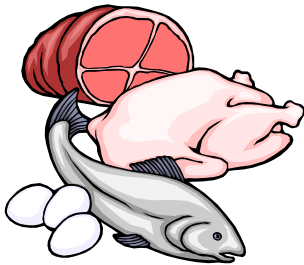
Potentially hazardous foods must NOT be thawed at room temperature!
Thaw foods using one of the following methods:



- a) In a refrigerator at 41° F or lower
- b) In a microwave oven
- c) Under cold running water
- d) As part of the cooking process



Preventing Cross Contamination



Cross contamination is the transfer of harmful organisms from one item of food to another by:

- 1) Hands touching raw foods, and then touching cooked or ready-to-eat foods;
- 2) Food surfaces in contact with raw food, and then in contact with foods that will receive no further cooking without the surface being cleaned and sanitized between activities;
- 3) Cleaning cloths and sponges used to clean or wipe food contact surfaces, equipment or utensils. Cloths and sponges should be cleaned and sanitized between uses; and,
- 4) Raw "drippy" foods in direct contact with or "dripped" on to cooked or ready-to-eat foods.

People are the primary agents for cross contamination. Watch for poor hygiene, ineffective food handling and improperly cleaned and maintained equipment.





Cleaning, Sanitizing and Maintenance of the Facility

Proper Sanitizing of Dishes & Utensils

All multi-use cooking equipment (pots, pans and cooking utensils), utensils, plates, glasses and cups that come in contact with customers or raw animal products must be sanitized after they are washed. This is to assure that all harmful bacteria or diseases are eliminated.

Multi-use dishes and equipment can be washed and sanitized in one of two ways:

1) Manual sanitizing using a (3) component sink following six steps:

- a) Clean and sanitize sinks and work surfaces
- b) Flush, scrape, or soak equipment and utensils before washing
- c) Wash in the first sink in a detergent solution with a water temperature of 120° F
- d) Rinse in a clear water solution (120° F)
- e) Sanitize in the third sink using one of the following solutions:

1. 100 ppm chlorine bleach for 30 seconds
2. 200 ppm quaternary ammonia for 1 minute
3. 25 ppm iodine for 1 minute

Test strips must be used to verify the correct concentration.

f) Air Dry

2) Automatic Dishmachine following four steps:

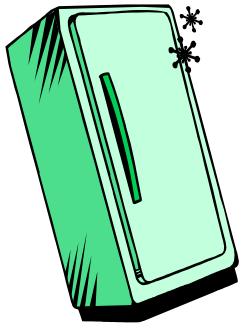
- a) Flush, scrape, or soak equipment and utensils
- b) Load machine – overloading will result in ineffective cleaning
- c) Make sure all surfaces are exposed to each phase of the dishwashing cycle
- d) Air dry

Use test strips to check the sanitizer level in the final rinse cycle. If the machine is a high temperature machine, check the temperature gauge everyday to make sure it is reaching 180° F for at least 30 seconds.



Storage of Foods

Dry storage areas must be clean and dry and free of rodents and insects. Storage areas must also be well ventilated and maintained at a temperature of 50° - 70° F. General guidelines for storing food:



- Follow the First In, First Out (FIFO) rule for stock rotation.
- Label and date prepared foods.
- Store foods only in designated storage areas, not in restrooms, furnace rooms, or hallways.
- Foods should not be stacked on storage area floors or unit floors. Allow enough space for air to circulate around foods in refrigerated and freezer storage. Elevate all food 6 inches off the floor.
- Keep foods in leak-proof, non-absorbent, sanitary wrappings and never put food directly on metal shelves that might cause a chemical reaction.
- Provide enough slatted shelves in storerooms, refrigerators, and freezers so food does not have to be stored on the floor.
- Put thermometers in the warmest area of each refrigerator and freezer unit.
- Use refrigerators (unit temperature of 41° F [4.4° C] or lower) only for short-term storage. Ideally, each major food type, such as meats and dairy products, should be stored in a separate refrigerator set at the correct temperature.
- Use freezers (unit temperature of 0° F [-17.7° C] or lower) only to store already chilled or frozen foods. Units should be defrosted regularly. During the defrosting of the unit, frozen foods should be moved to another freezer.
- Store cooked foods and foods that will receive no further cooking above raw foods to avoid contamination.

Storage of Chemicals

Chemicals can also cause food poisoning. Chemicals like cleaners and pesticides can also cause food poisoning if they get into food. Chemical cleaners, detergents, and pesticides must be stored in a separate location. They cannot be kept where food is stored, prepared or served. Keep all chemicals in their original containers, clearly labeled as to the contents. Only pesticides and rodenticides approved by the United States EPA for use in food facilities may be used. Household pesticides like Raid and Decon are not safe to use in a food facility. Pesticide application should be done by a trained professional to assure that it is done safely and correctly. If food has been contaminated by chemicals or pesticides, it can make someone very sick.





Maintenance of the Facility and Equipment

The floors, walls, ceilings, equipment and utensils in a food facility must be kept clean and in good repair. Have a cleaning schedule for all equipment (see sample cleaning schedule). Some things need to be taken apart, like meat grinders and slicers. Clean beneath, behind and above the equipment. Do not neglect corners, shelves, and hard to reach places. Everything needs to be cleaned on a regular basis. If it is used daily, it needs to be cleaned daily.



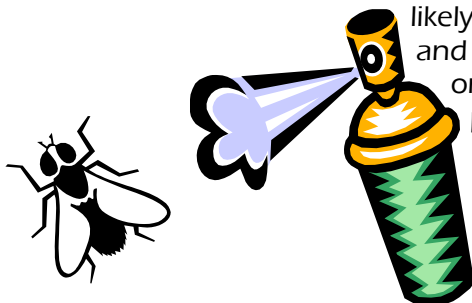
Keep the building in good repair. Fix torn screens, broken or missing floor tiles, and leaking pipes right away. Surfaces where paint is chipped must be sanded and repainted. Anything made of wood, like shelves or cupboards must be painted or sealed to make the wood nonporous. Paint should be light-colored and easily cleanable when dry. New equipment must meet National Sanitation Foundation (NSF) standards. Appliances must be NSF commercial equipment, not household appliances.

Pest Control

Bacteria can be introduced into food by pests. Practicing good pest control keeps flies, cockroaches and rodents from contaminating foods. A food facility must have a regular pest control procedure to prevent infestation. Also, pests must be prevented from entering, harboring and breeding in the food facility.

Flies

Flies carry millions of bacteria. They eat by vomiting their stomach contents onto the food to make it soft, then they suck it up. They are likely to defecate in the food at the same time. Flies are attracted to and feed on manure, sewage, garbage and filth. When they land on food and food preparation surfaces, anything the fly has previously eaten, will be vomited onto the food.





Sample Cleaning Schedule

ITEM	WHAT	WHEN	USE	WHO
Floors	Wipe up spills	As soon as possible	Cloth, mop and bucket, broom and dustpan	
	Damp mop	Once per shift, between rushes	Mop, bucket	
	Scrub	Daily, closing	Brushes, squeegee, bucket, detergent (brand)	
	Strip, reseal	January, June	See procedure	
Walls and Ceilings	Wipe up splashes	As soon as possible	Clean cloth, detergent (brand)	
	Wash walls	February, August		
Work Tables	Clean and sanitize tops	Between uses and at the end of the day	See cleaning procedure for each table	
	Empty, clean, and sanitize drawers; clean frame, sheet	Weekly, Saturday closing	See cleaning procedure for each table	
Hoods and Filters	Empty grease traps	When necessary	Container for grease	
	Clean inside and outside	Daily, closing	See cleaning procedure	
	Clean filters	Weekly, Wednesday closing	Dishwashing machine	
Broilers	Empty drip pan, wipe down	When necessary	Container for grease, clean cloth	
	Clean grid tray inside, outside, and top	After each use	See cleaning procedure for each broiler	



To prevent flies from entering:

- a. Assure all doors and windows are screened if they are to be left open.
- b. If your door or window has an overhead air curtain, keep it turned on when the door is open. Flies cannot fly through the air current.
- c. Have your garbage picked up at least twice a week to prevent flies from breeding in it. Tie all garbage in plastic bags before disposal, and keep the lids closed on the dumpsters. This will make flies less attracted to the garbage, and the food facility. Also, keep the surrounding area clean; if the dumpster gets dirty, ask the disposal company to bring out a clean one.



Cockroaches

Cockroaches carry bacteria on their legs and in their intestinal tracts. They contaminate food by walking on it, and by urinating and defecating in it.

To prevent cockroaches from entering:

- a) Seal up any cracks, crevices or gaps where cockroaches can hide. Use a caulking gun to form a tight seal.
- b) Inspect deliveries of produce for cockroaches. If the delivery is infested, do not bring it into the facility. Call the vendor and have them pick it up.
- c) Keep the facility clean. Food particles and grease on equipment and floors provide a food supply capable of supporting a large cockroach population. Food left out overnight and containers not properly covered provide food for cockroaches.
- d) Remove unused equipment and junk cluttering the facility. These undisturbed areas offer cockroaches a peaceful place to live and breed.
- e) If you notice cockroaches in the facility, notify your supervisor so that they can take appropriate action.

Rodents

Rats and mice also contaminate food by urinating and defecating in it. They can make food unusable by gnawing or nesting in it.

- a) Seal up all holes in walls, ceilings, and along coving to prevent entry and harborage of rats and mice. Mice can get in through holes as small as 1/4 inch.
- b) Store food in containers that rats and mice cannot get into.
- c) Keep storage areas clean, well-lighted, and clear of clutter and unused equipment.
- d) Notify your supervisor if you see a rat or mouse, or if you see droppings left by these rodents.



Inspection Requirements

The basic areas an inspector examines during a routine inspection are listed as follows:

I. FOOD PREPARATION AREA

- A. Food Handling Procedures
 1. Temperature Monitoring of Potentially Hazardous Foods (sanitize thermometer)
 - a. internal cooking temperatures
 - b. hot holding temperatures
 - c. reheating temperatures
 2. Cooling Methods
 3. Thawing Methods
 4. Food Source (approved/oyster tags/signs)
- B. Employee Practices
 1. Hand washing (hot/cold water, single service soap/towel, method, sign)
 2. Personal Practices (eating, smoking)
 3. Personal Hygiene (hair restraints, clean clothes, abrasions, health)
 4. Food Handling Techniques (cross contamination, bare hands, diligent preparation)
- C. Refrigeration/Freezer Units
 1. Food Storage (covered, approved containers, labeled, off floor)
 2. Cold Holding (food temperature/thermometer)
 3. Light Shields
 4. Walls, Ceiling, Floors, Shelving (clean, good repair)
 5. Refrigerator/Ice Bin (drainage)
 6. Approved Unit (good repair)

D. Physical Inspection of Food Preparation Area

1. Approved, Clean and Sanitary
2. All Equipment (approved, clean, good repair)
3. All Utensils (approved, clean, good repair)
4. Condition of Floors, Walls, Ceiling (approved, clean, good repair)
5. Ventilation (adequate, approved, clean, light shields, make-up air)
6. Vermin and Food Infesting Insects
7. Lighting
8. Food Preparation Sink (indirectly connected)

II. UTENSIL WASHING AND SANITIZING

- A. Sanitizing Multi-use Customer Utensils
 1. Manual (number and size of sink compartments, method, faucet extension, cross-connection)
 2. Mechanical (chemical/heat)
 3. Test Kit
- B. Sanitizing Food Contact Surfaces
 1. Frequency
- C. Hot/Cold Water Under Pressure
- D. Vermin



III. FOOD STORAGE AREA

- A. Clean, Sanitary, Approved, Adequate Space
- B. Method of Storage (approved containers, labeled, elevated)
- C. Quality and Wholesomeness of Food (adulterated, approved source)
- D. Vermin and Food Infesting Insects
- E. Adequate Lighting

IV. UTENSIL STORAGE AREA

- A. Clean, Sanitary, Approved, Adequate Space
- B. Equipment/Utensils Approved (commercial)
- C. Vermin

V. FRONT SERVICE AREA

- A. Steam Table (hot-holding temperature, drainage)
- B. Condiment/Table Service (food reuse)
- C. Sneeze Guards (approved)
- D. Salad Bars (food temperature, drainage)
- E. Dispensing Units (clean, drainage)
- F. Pass-Thru Opening (size, closeable)
- G. Vermin

VI. FACILITIES

- A. Lavatories (approved location, hot/cold water, dispensers, good repair)
- B. Toilet rooms (self-closing, toilet paper, ventilation, clean, unapproved storage)
- C. Vermin
- D. Miscellaneous Storage (non-food related items)

VII. DELIVERY/TRANSPORTATION/RECEIVING

- A. Food Temperatures
- B. Food Condition (spoilage, vermin)
- C. Purveyor/Source
- D. Stored in a Timely Manner
- E. Container Condition (approved)

VIII. JANITORIAL/CHEMICAL STORAGE AREA

- A. Chemicals Stored Away from Food
- B. Chemicals Labeled, Directions Followed
- C. Clean
- D. Vermin

IX. EMPLOYEE/LINEN STORAGE AREA

- A. Personal Items (lockers, separate area)
- B. Linen (use; storage)
- C. Clean
- D. Vermin

X. EXTERIOR OF PREMISES

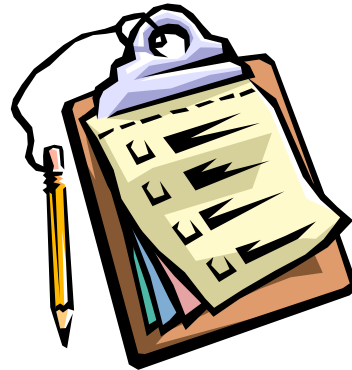
- A. Trash/Grease Disposal (clean, lids closed)
- B. Premises
- C. Rodent-proofed
- D. Fly Exclusion (air curtain, self-closing door)

Conclusion

Food poisoning can cause acute illness and sudden death especially in high risk groups. As more consumers eat away from home, the number of foodborne illnesses is likely to rise, costing the restaurant industry billions of dollars.

Foodborne Illness in Restaurants

Foodborne illness due to restaurants is preventable. By implementing an effective food safety program a food facility can avoid the costly effects from the incidence of foodborne illnesses. Operators must realize that preventing food poisoning is not only good for the health of the public, but for the food facility's economic health as well.



While regular inspections and enforcement of State health laws by the local health department are important to assure food safety, the ultimate responsibility rests with the food operator. Every food facility must take steps to ensure the safety of the food it prepares and serves.

Our mission at the City of Long Beach
Department of Health & Human Services
is to improve the quality of life of the
citizens of Long Beach by addressing
the public health and human
service needs ensuring that the
conditions affecting the public's health
afford a health environment
in which to live, work and play.



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